

IN THE CLAIMS:

Claims 2, 4-10, 12, 14, 15, and 17-26 were previously cancelled. Claim 1 has been amended herein. New claims 27-30 are presented herein. All of the pending claims 1, 3, 11, 13, 16, and 27-30 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of the Claims:

1. (Currently amended) A recombinant receptor comprising:
an extracellular ligand-binding domain of a mammalian receptor; and
a cytoplasmic domain comprising a domain derived from a cytoplasmic domain of a mammalian receptor, at least one activation site that is a tyrosine residue and a heterologous bait polypeptide heterologous to the domain derived from a cytoplasmic domain of a mammalian receptor;
wherein said cytoplasmic domain comprises JAK-binding site; and
wherein the activation of said recombinant receptor is inhibited by binding of a fusion protein to said heterologous bait polypeptide, said fusion protein comprising a prey polypeptide and at least one of an inhibitor of the activation of said recombinant receptor that is selected from the group consisting of a member of the SOCS family, a ~~JAK-phosphatase~~ JAK-phosphatase, and a STAT-phosphatase.
2. (Cancelled).
3. (Previously presented) The recombinant receptor of claim 1, wherein said recombinant receptor is activated by the addition of a compound that disrupts an interaction between said heterologous bait polypeptide and said prey polypeptide.
- 4.-10. (Cancelled).
11. (Previously presented) A vector encoding the recombinant receptor of claim 1.

12. (Cancelled).

13. (Previously presented) A eukaryotic cell comprising the recombinant receptor of claim 1.

14-15. (Cancelled).

16. (Previously presented) A cloning vector encoding a recombinant receptor, comprising:

a nucleotide sequence encoding a cytoplasmic domain of a mammalian receptor, wherein the nucleotide sequence comprises at least one restriction site configured to allow an in frame fusion of a nucleic acid sequence encoding a bait polypeptide, wherein insertion of the nucleic acid sequence encoding said bait polypeptide results in the vector of claim 11.

17-26. (Cancelled).

27. (New) A recombinant receptor complex comprising:

a recombinant receptor comprising

an extracellular ligand-binding domain of a mammalian receptor; and

a cytoplasmic domain comprising a domain derived from a cytoplasmic domain of a mammalian receptor, at least one activation site that is a tyrosine residue and a heterologous bait polypeptide heterologous to the domain derived from a cytoplasmic domain of a mammalian receptor;

the complex further comprising a fusion protein comprising a prey polypeptide and at least one of an inhibitor of the activation of said recombinant receptor that is selected from the group consisting of a member of the SOCS family, a JAK-phosphatase, and a STAT-phosphatase;

wherein said cytoplasmic domain comprises JAK-binding site; and

wherein the activation of said recombinant receptor complex is inhibited by the binding of a said fusion protein to said heterologous bait polypeptide.

28. (New) The recombinant receptor complex of claim 27, wherein said recombinant receptor is activated by the addition of a compound that disrupts an interaction between said heterologous bait polypeptide and said prey polypeptide.

29. (New) A set of vectors encoding the recombinant receptor complex of claim 27.

30. (New) A eukaryotic cell comprising the recombinant receptor complex of claim 27.